

# HTML5 for the Silverlight Guy

An introduction to “Serious”  
development on the Web Platform

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@davidpadbury

So, this whole Silverlight vs HTML5 has  
been a little controversial...



“Microsoft execs said tonight ... allow them to create Windows 8 applications in HTML and/or JavaScript. Sinofsky and others didn't mention Silverlight or XNA at all.”

[http://www.zdnet.com/blog/microsoft/windows-8-more-than-just-windows-phone-on-your-pc/9592?tag=mantle\\_skin;content](http://www.zdnet.com/blog/microsoft/windows-8-more-than-just-windows-phone-on-your-pc/9592?tag=mantle_skin;content)



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Windows 8 apps going html5, wtf

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## Windows 8 apps going html5, wtf

192 replies

Last post Jun 03, 2011 07:23 PM by [Psychlist1972](#)

★★★★★ (5)



[bitdisaster](#)

Participant



1004 Points

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### Windows 8 apps going html5, wtf

Jun 02, 2011 12:06 AM | [LINK](#)

Just watched the first official Windows 8 video <http://www.youtube.com/watch?v=p92QfWOw88I>. While I like the UI/UX, I don't like that we are supposed to write Windows 8 apps in html/js. Wow, thats the stupids thing I ever heard. Microsoft has a first class cross-platform application framework called Silverlight and they want us to write freaking javascript. Really!? Probably the next version of WindowsPhone will run HTML5 as well. C'mon, I'm really disappointed.

Any thoughts?



Did I mention that i'm disappointed. HTML for text, XAML for apps, what's so complicated?

An disappointed Silverlight developer.

Jan Hannemann

Research Associate University of Victoria

Please remember to mark the replies as answers if they answered your question

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44 Points

38 Posts

### Re: Windows 8 apps going html5, wtf

Jun 02, 2011 12:56 AM | [LINK](#)

Potentially TERRIBLE news. It almost puts me in a state of shock. My biggest fears coming into Windows 8 was that, as a mostly WPF+.NET developer, was that they would shift everything to Silverlight and leave the FULL platform (can you write a VisualStudio in Silverlight? of course not, not designed for that) in the dust. To my utter shock, they did something much, much, much worse.

I say 'potentially' because, it is possible WPF and Silverlight will be able to be everywhere and do everything that the Html5+JavaScarry "platform" (replacing XAML + C#.... can you believe your eyes? I can't) can do in full integration into the

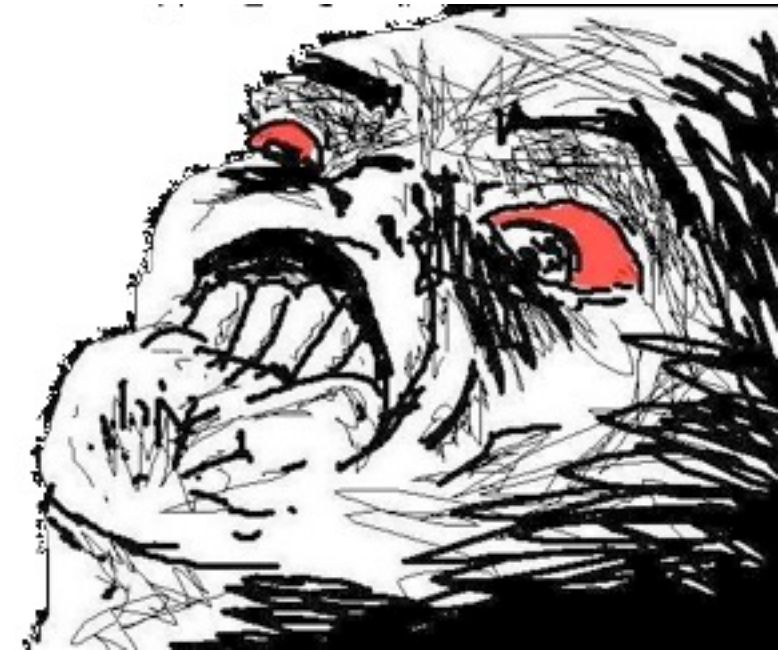
...Now they're not just f\*\*\*\*\*g Silverlight developers, they're f\*\*\*\*\*g WPF developers as well? ...

Just so there's no confusion, when my text is edited, the \*\*\* stands for

F - \* - \* - \* - \* - \* - G

Because we've just been F\*\*\*\*\*D.

<http://forums.silverlight.net/forums/p/230502/562113.aspx#562081>



“...they want us to write freaking javascript. Really!?”

“HTML5??? Microsoft isn't eating their own dogfood, they're eating their own vomit.”

“It may just be a very cool thing if they are brewing a way to utilize html5 + javascript  
\*\*without us having to mess with javascript\*\* (exactly what ASP.NET does on the client side)”

“At this point html5/js is a horrible development platform... I have not seen a single  
project developed purely in html/js.”

“we get Html and JavaScarriness in place of the beauty we know”

“Seriously, who decided that we should start basing all of our computing around the  
most abysmally slow language!?”

“Contrary to popular belief, HTML 5 is not ready yet.”

“there is no way you would write a trading application in HTML5 and javascript”

Javascript may be the WORST language ever used to write "applications". It's a joke.



▲ xradionut 3 hours ago | [link](#)

Yeah, let's have a richly, wonderful, HTML interface that still can't replicate desktop GUI productivity from the 90's...

[reply](#)

▲ WayneDB 3 hours ago | [link](#)

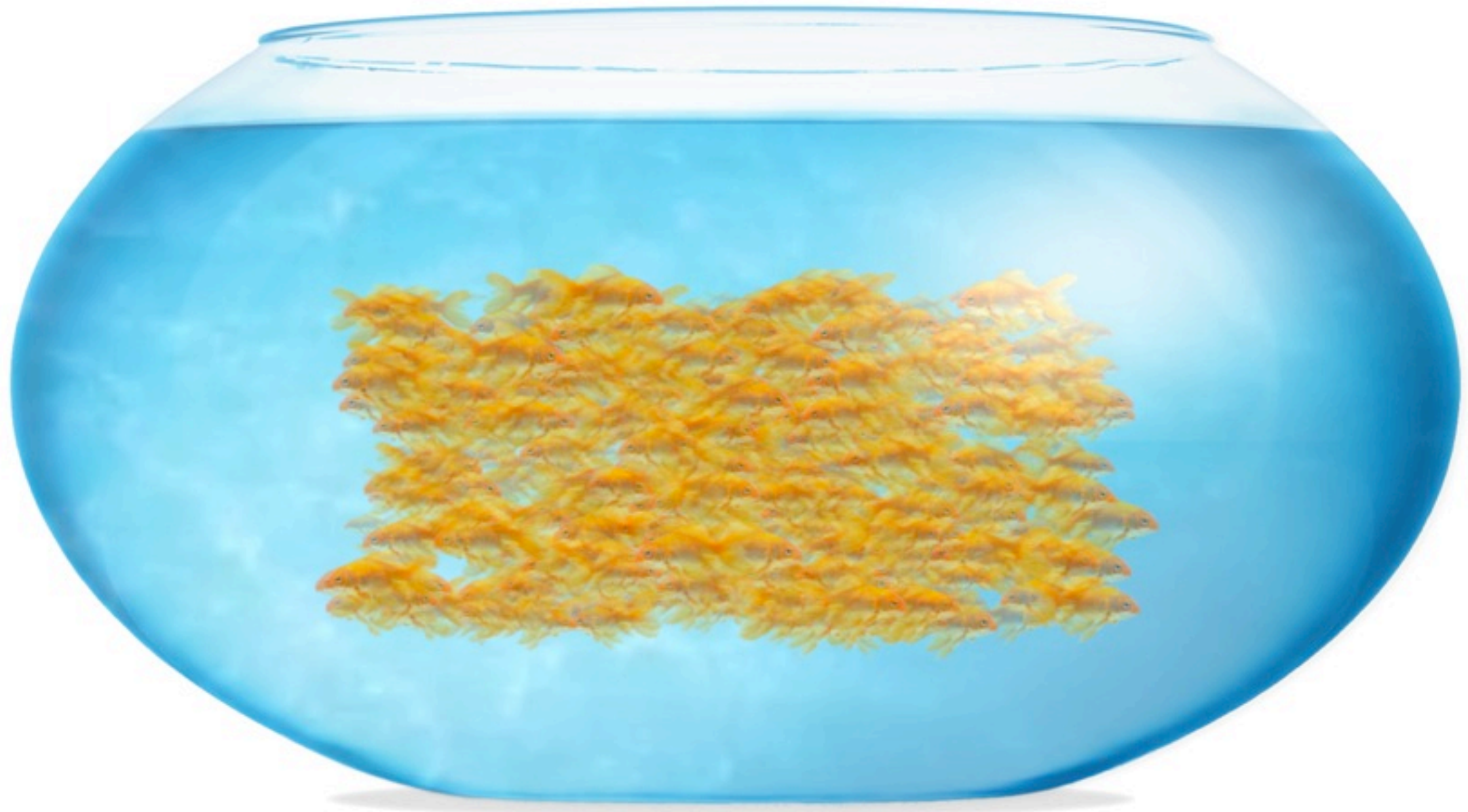
This is exactly the problem. HTML/CSS/JS is disgusting to someone who knows the power of a good native SDK.

People who only do web dev just don't know what quality is.

[reply](#)

“You can’t write serious applications in  
HTML and JavaScript.”





Fish  
500

Layers

- ✓ Water
- ✓ Frame
- ✓ Mask
- ✓ Back
- ✓ Fish
- ✓ Front
- ✓ Shine
- ✓ Shadow
- ✓ Audio
- ✓ Logo
- FPS
- Needle

There's lots of cool HTML5 demos out there

But how do I build a rich front end application?

That's what I'm going to (try) helping you understand today.

But first.

**Silverlight is not dead.**

Evaluate HTML5 the same way you would anything else.

It's good at some things, it sucks at others.

Although this is the web,  
forget your server side web programming experience.

*ASP.NET, Rails, Grails, PHP*

*Well, not entirely but you'll see where I'm going.  
I'm trying to be dramatic.*

Writing complex front-end in HTML+JavaScript  
has more in common with WPF/SL than ASP.NET

*For you guys, this is a good thing.*

**Let's talk business.**

## CFI STOCKTRADER

POSITION

WATCH LIST

Add to Watch List

Symbol	Shares	Last	Cost Basis	Market Value	Gain/Loss %	Actions	
STOCK0	10	\$317.11	\$280.99	\$3,171.06	1028.5%	+	-
STOCK2	100	\$224.83	\$1,900.22	\$22,483.09	1083.2%	+	-
STOCK3	100	\$481.10	\$1,900.22	\$48,109.67	2431.8%	+	-
STOCK6	50	\$475.88	\$523.43	\$23,794.09	4445.8%	+	-
STOCK7	25	\$367.62	\$6,990.13	\$9,190.45	31.5%	+	-

STOCK2 HISTORICAL DATA



PIE CHART



NEWS ARTICLES

3/31/2008 12:00:00 AM  
Great Lakes Goes Healthy

12/6/2007 12:00:00 AM  
Ravioli Scare Prompts Government Action

5/24/2006 12:00:00 AM  
It's Pasta La Vista for Great Lakes

2/14/2005 12:00:00 AM  
Henderson: It's Gone Well Pasta Joke



Application is built from modules  
Modules are decoupled from each other  
Code is easy to test  
Runs on Desktop, RIA, and (windows 7) Phone

# Today's Talk

## JavaScript

JavaScript Modules  
Module Organization  
Views as Modules

## Decoupling and Testing

Event Aggregator/PubSub  
Unit Testing View Modules

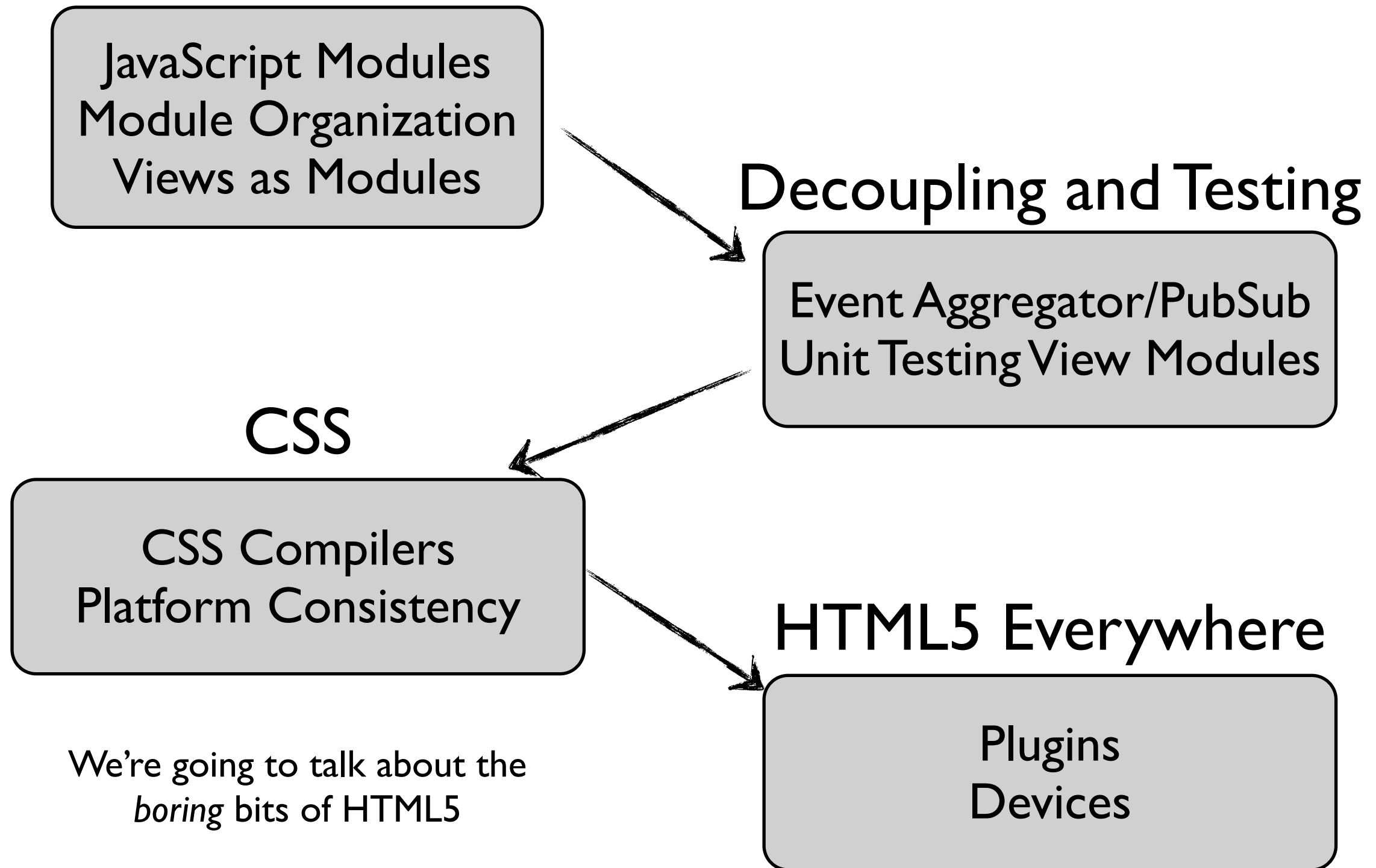
## CSS

CSS Compilers  
Platform Consistency

## HTML5 Everywhere

Plugins  
Devices

We're going to talk about the  
*boring* bits of HTML5



“JavaScript doesn’t suck.  
You’re just doing it wrong.”

*- Douglas Crockford  
(father of JSON and JSLint, author of The Good Parts)*

The tone’s a little harsh, but he has a point.  
Despite looking similar to C#, JavaScript is a very different language.

# JavaScript is a very simple language

If you can learn C#, you can cope with JavaScript.

There are three things you have to learn to  
be a great JavaScript developer.

First Class Functions

Prototypes

Context

# First Class Functions

```
function createCounter() {  
    var count = 0;  
  
    return function() {  
        return count++;  
    };  
}
```

```
var counter1 = createCounter(),  
    counter2 = createCounter();
```

```
console.log( counter1() ); // 0  
console.log( counter1() ); // 1  
console.log( counter2() ); // 0  
console.log( counter1() ); // 2
```

# Context

*Or, which this is this?*

```
var david = {  
  name: 'David',  
  sayHi: function() {  
    console.log("Hi, I'm " + this.name);  
  }  
};
```

```
david.sayHi(); // Hi, I'm David  
// obj.fn() is eqv to obj.fn.call(obj)
```

```
david.sayHi.call({name: 'Colleen'});  
// Hi, I'm Colleen
```



# Prototypes

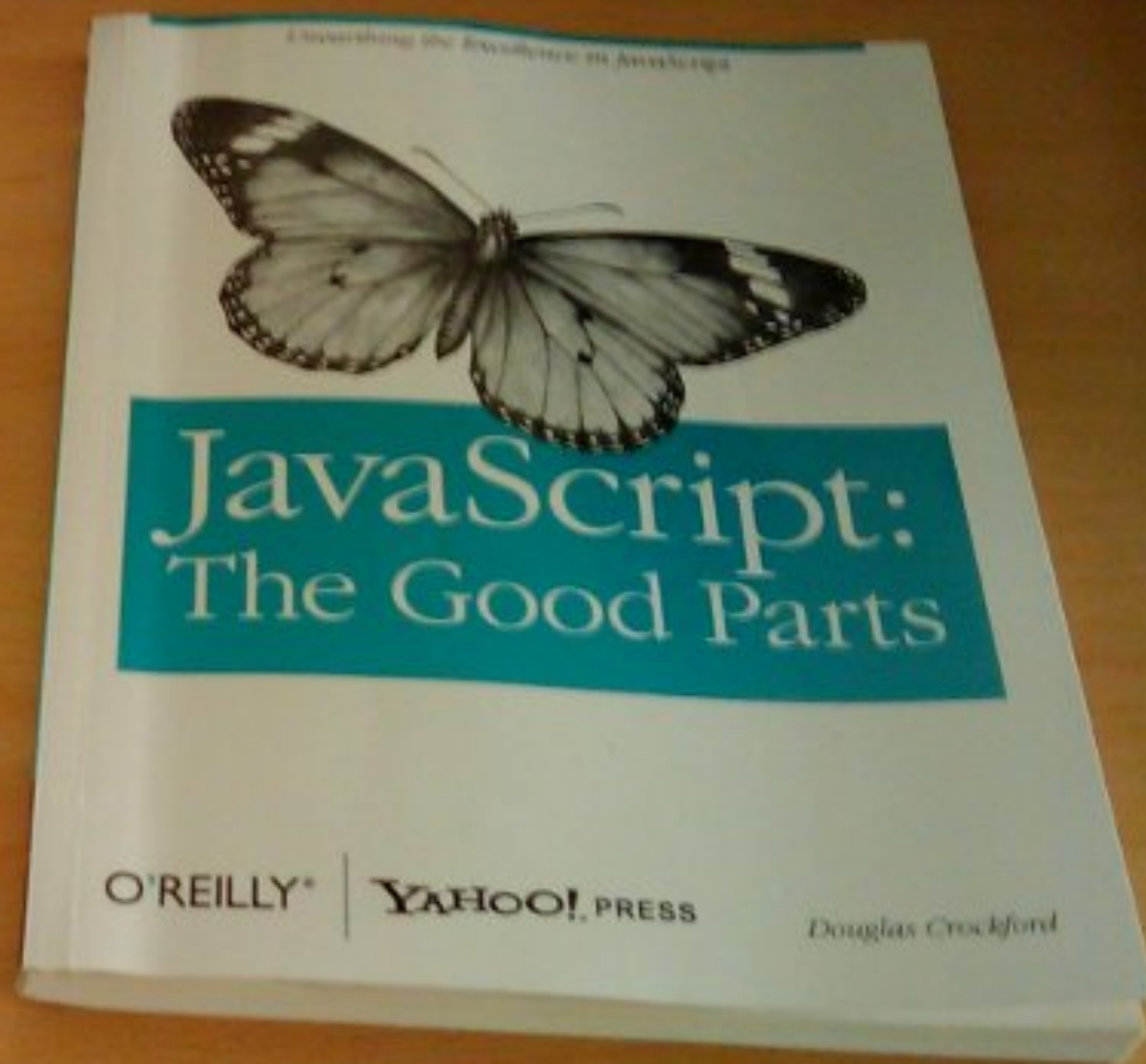
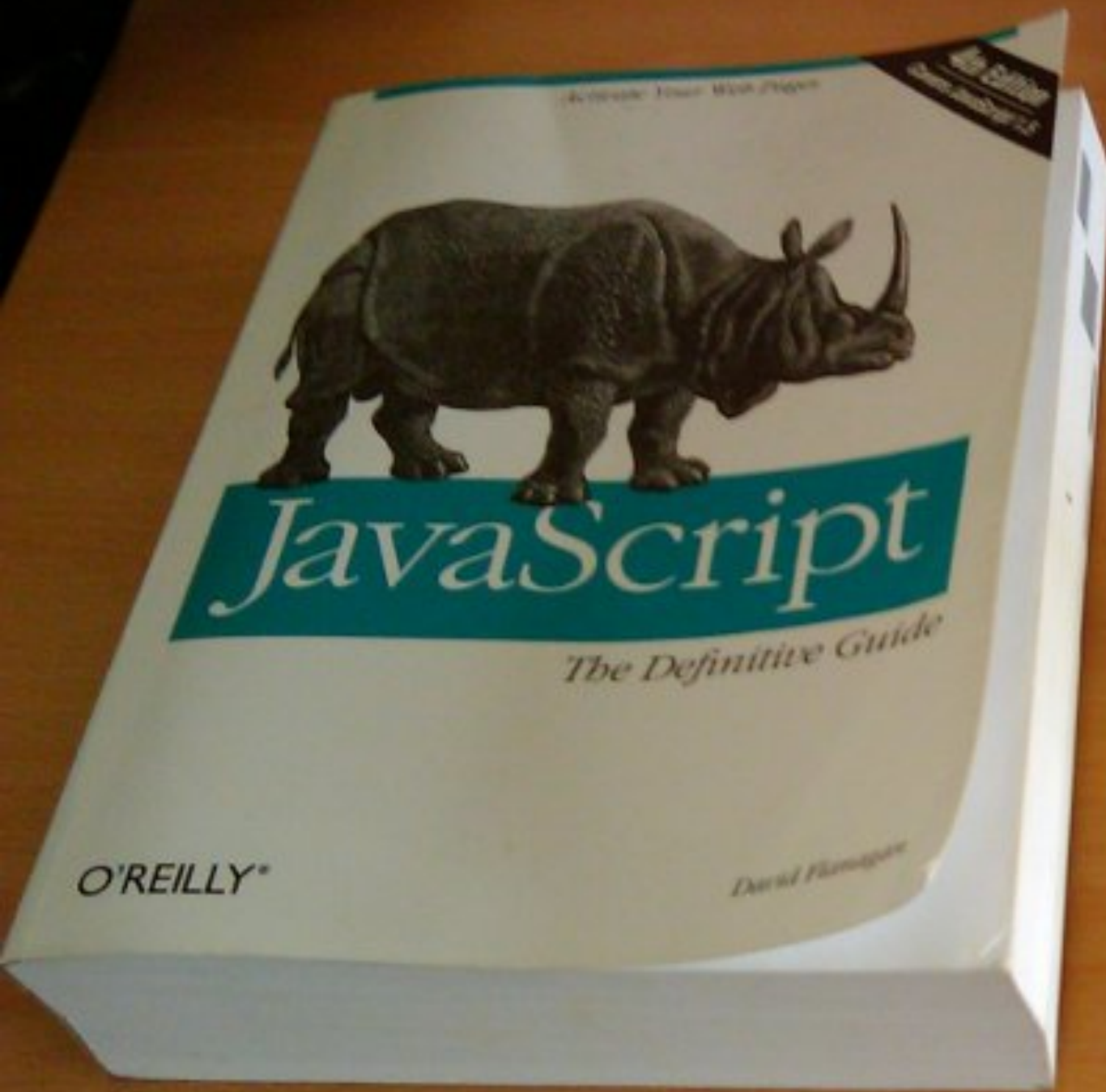
```
function Person(name) {  
    this.name = name;  
}
```

```
Person.prototype.sayHi = function() {  
    console.log("Hi, I'm " + this.name);  
};
```

```
var david = new Person('David'),  
    colleen = new Person('Colleen');
```

```
david.sayHi(); // Hi, I'm David  
colleen.sayHi(); // Hi, I'm Colleen
```

```
console.log( david.sayHi === colleen.sayHi ); // true
```



Some older bits aren't great...

# strict mode keeps us on the Good Parts

Start a file with 'use strict';

```
'use strict';  
alert( "I'm in strict mode." );
```

Or start a function with 'use strict';

```
(function() {  
    'use strict';  
  
    alert("I'm in strict mode!");  
})();
```

```
(function() {  
    globalVariable = '00PS!';  
})();
```

```
console.log(globalVariable);  
// 00PS!
```

```
(function() {  
    'use strict';  
    globalVariable = 'OOPS!';  
})();  
  
console.log(globalVariable);
```

ReferenceError: globalVariable is not defined

```
var person;
```

```
(function() {  
    person = {  
        name: 'David',  
        name: 'Colleen'  
    };  
})();
```

```
console.log(person.name);  
// Colleen
```

```
var person;  
  
(function() {  
    'use strict';  
    person = {  
        name: 'David',  
        name: 'Colleen'  
    };  
})();  
  
console.log(person.name);
```

SyntaxError: Duplicate data property in  
object literal not allowed in strict mode



```
(function() {  
    console.log( 012 + 2 );  
})();
```

```
(function() {  
    console.log( 012 + 2 ); // 12?!  
})();
```

```
(function() {  
    'use strict';  
    console.log( 012 + 2 );  
})();
```

SyntaxError: Octal literals are not  
allowed in strict mode.

In some ways, too simple.

C# has **using**

Visual Basic has **Imports**

JavaScript has?

C# has **using**

Visual Basic has **Imports**

JavaScript has?  
Nothing.

```
<!DOCTYPE HTML>
<html>
  <body>
    <script>
      // Application goes here...
    </script>
  </body>
</html>
```



```

$(document).ready(function() {
    function addSymbol(symbol) {
        var row = $('<tr>').append($('<td>').text(symbol));
        $('.watches').children().append(row);
    }
    $('.screen-switcher a').click(function() {
        var screen = $(this).attr('data-screen-id');
        $('.screens .screen').slideUp('fast', function() {
            $('.screens .screen[data-screen=' + screen + ']').slideDown();
        });
    });
    $('.add-symbol').parent('form').submit(function(e) {
        e.preventDefault();
        var symbol = $('.add-symbol').val();
        addSymbol(symbol);
        $.ajax('/data/symbol' + symbol, {
            completed: function(xhr, data) {
                $('<div class="price">')
                    .text(data.price)
                    .click(function() {
                        $('.price .tooltip')
                            .show('fast', function() {
                                $(this).text(price);
                            });
                    });
            }
        });
    });
    $('.sidebar .history').flot({
        data: $.ajax('/stock/history', {
            data: [1,23,4,5,6],
            date: new Date().getTime()
        });
    });

```

## Everything is global by default

```
// lib1.js  
function something() {  
    console.log('foo');  
}
```

---

```
// lib2.js  
function something() {  
    console.log('bar');  
}
```

---

```
<script src="lib1.js"></script>  
<script src="lib2.js"></script>  
<script>  
    something(); // bar  
</script>
```

*The patterns and tools and practices that will  
form the foundation of Modern JavaScript are  
going to have to come from outside  
implementations of the language itself*

- Rebecca Murphey

# Using simple JavaScript constructs we can emulate many traditional organization techniques

```
(function(lab49) {  
  
    function privateAdder(n1, n2) {  
        return n1 + n2;  
    }  
  
    lab49.add = function(n1, n2) {  
        return privateAdder(n1, n2);  
    };  
  
})(window.lab49 = window.lab49 || {});
```

---

```
lab49.add(2, 3);
```

Known as the Module Pattern

<http://blog.davidpadbury.com/2011/08/21/javascript-modules/>

# Using simple JavaScript constructs we can emulate many traditional organization techniques

```
(function(lab49) {  
  
    function privateAdder(n1, n2) {  
        return n1 + n2;  
    }  
  
    lab49.add = function(n1, n2) {  
        return privateAdder(n1, n2);  
    };  
  
})(window.lab49 = window.lab49 || {});
```

---

```
lab49.add(2, 3);
```

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    };  
  
})(window.lab49 = window.lab49 || {});
```

---

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lab49.add(2, 3);
```

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# Using simple JavaScript constructs we can emulate many traditional organization techniques

```
(function(lab49) {  
  
    function privateAdder(n1, n2) {  
        return n1 + n2;  
    }  
  
    lab49.add = function(n1, n2) {  
        return privateAdder(n1, n2);  
    };  
  
})(window.lab49 = window.lab49 || {});
```

---

```
lab49.add(2, 3);
```

Known as the Module Pattern

<http://blog.davidpadbury.com/2011/08/21/javascript-modules/>

Modules have evolved into standard patterns with tooling to help loading and packaging.

Asynchronous Module Definition  
(Commonly known as AMD)

<https://github.com/amdjs/amdjs-api/wiki/AMD>



`define` for creating a module definition.

`require` to ask for a module instance.

```
define('calculator', function() {  
    return {  
        add: function(n1, n2) {  
            return n1 + n2;  
        }  
    };  
});
```

Callback so modules can be loaded asynchronously



```
require(['calculator'], function(calculator) {  
    console.log( calculator.add(1, 2) ); // 3  
});
```

```
define('math/adder', function() {  
    return {  
        add: function(n1, n2) {  
            return n1 + n2;  
        }  
    }  
});
```

Specify modules this module depends on




```
define('math/calculator', ['./adder'], function(adder) {  
    return {  
        add: function(n1, n2) {  
            return adder.add(n1, n2);  
        }  
    };  
});
```

Loader passes instances of them



Loaders can assume module names from files

```
// math/adder.js
define(function() {
    return {
        add: function(n1, n2) {
            return n1 + n2;
        }
    }
});
```



```
// math/calculator.js
define(['./adder'], function(adder) {
    return {
        add: function(n1, n2) {
            return adder.add(n1, n2);
        }
    };
});
```

AMD appears to be winning in how to large JavaScript code bases

There are a number of AMD module loaders

*RequireJS, curl.js*

Popular libraries are supporting AMD

*Dojo, jQuery (as of 1.7)*

# Demo

*Basic RequireJS*

You can extend how modules are loaded using *plugins*

text!  
i18n!  
order!

```
// views/personView.html
```

```
<div>My name is: <span class="name"></span></div>
```




```
// views/personView.html
```

```
<div>My name is: <span class="name"></span></div>
```

```
// views/personView.js
```

```
define(['text!./personView.html'], function(tmp1) {  
    function PersonView(options) {  
        var el = $(options.el),  
            name = options.name;  
  
        el.html(tmp1).find('.name').text(name);  
    }  
    return PersonView;  
});
```




Ask for content with the text  
plugin and we get a *String*

```
// views/personView.html
```

```
<div>My name is: <span class="name"></span></div>
```

```
// views/personView.js
```

```
define(['text!./personView.html'], function(tmp1) {  
    function PersonView(options) {  
        var el = $(options.el),  
            name = options.name;  
  
        el.html(tmp1).find('.name').text(name);  
    }  
    return PersonView;  
});
```



Ask for content with the text  
plugin and we get a **String**

```
// index.html
```

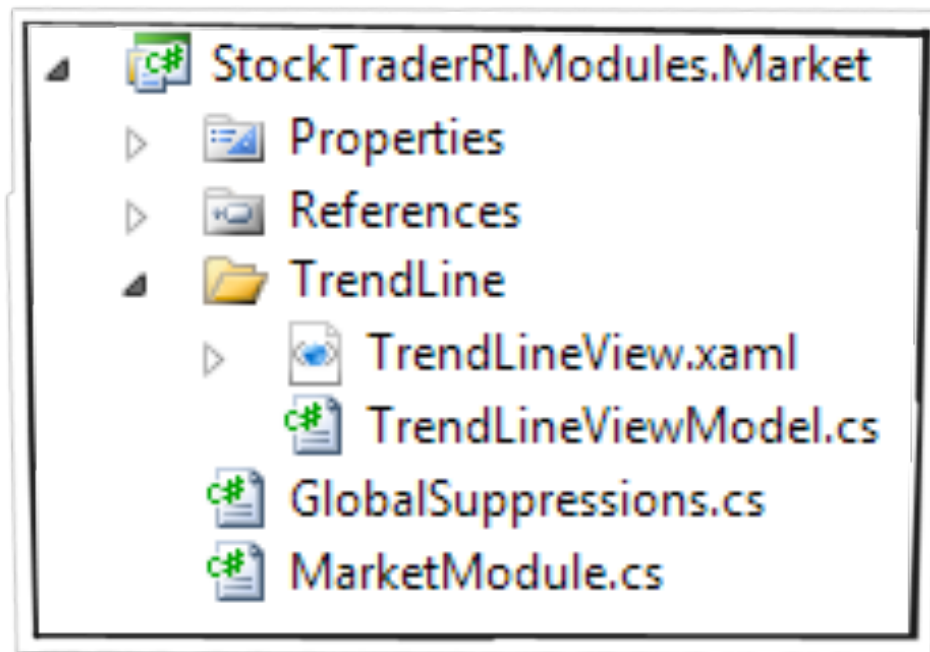
```
<div id="person"></div>
```

```
<script>
```

```
    require(['views/personView'], function(PersonView) {  
        var personView = new PersonView({  
            el: $('#person'), name: 'David'  
        });  
    });
```

```
</script>
```

This allows us to organize our applications the way we're used to



C#



JavaScript

*(Yep, I know you would've guessed...)*

# Demo

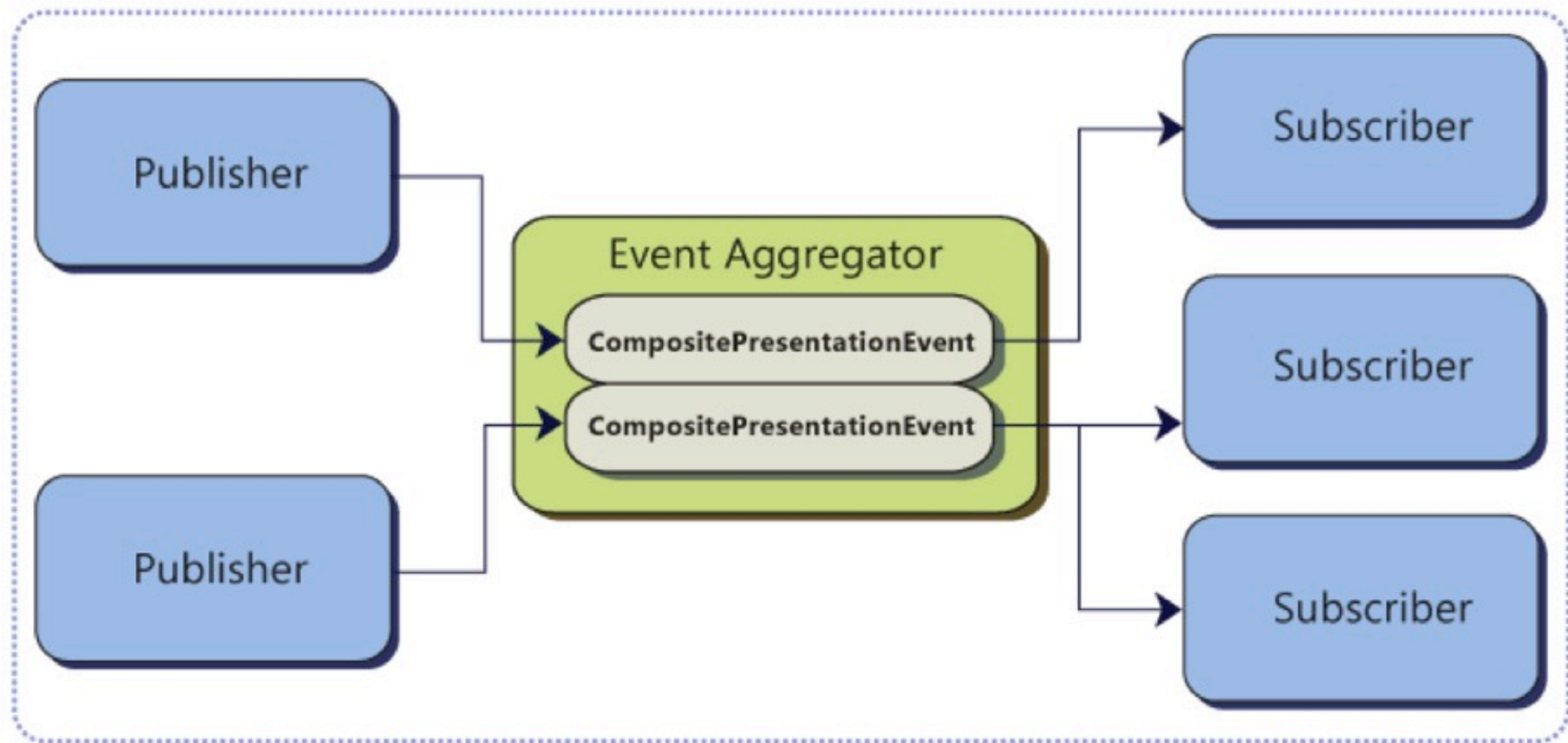
*“Controls” with RequireJS*

# Event Aggregator



The **EventAggregator** service is primarily a container for events that allow decoupling of publishers and subscribers so they can evolve independently. This decoupling is useful in modularized applications because new modules can be added that respond to events defined by the shell or, more likely, other modules.

In the Composite Application Library, **EventAggregator** allows subscribers or publishers to locate a specific **EventBase**. The event aggregator also allows for multiple publishers and multiple subscribers, as shown in Figure 1.



```
require(['pubsub'], function(PubSub) {  
    var bus = new PubSub();  
  
    bus.sub('say', function(msg) {  
        console.log('Subscriber 1 says: ' + msg);  
    });  
  
    bus.sub('say', function(msg) {  
        console.log('Subscriber 2 says: ' + msg);  
    });  
  
    bus.pub('say', 'Nope!');  
    // Subscriber 1 says: Nope!  
    // Subscriber 2 says: Nope!  
});
```

```
define('pubsub', function() {  
  function PubSub() {  
    this.subs = {};  
  }  
}
```

“Dictionary” to hold topic to  
list of subscriptions



Create topic list if none exists



```
  PubSub.prototype = {  
    sub: function(topic, fn) {  
      var topicSubs = (this.subs[topic] = this.subs[topic] || []);  
      topicSubs.push(fn);  
    },  
    pub: function(topic, data) {  
      var topicSubs = this.subs[topic] || [];  
      topicSubs.forEach(function(fn) {  
        fn(data);  
      });  
    }  
  };  
  return PubSub;  
});
```

Call each subscriber for topic



**(This is a horribly crap implementation - DON'T EVER USE IT!)**

# Demo

*pubsub*



The ease of Unit Testing is one of the  
biggest plus points for JavaScript

There's a lot less fighting the compiler.  
Which is handy, as they're useful as there is no compiler.

There is a large number of unit testing libraries and frameworks

*QUnit (of jQuery fame)*

*Jasmine (BDD'ish)*

```
describe('Calculator', function() {  
    var calculator;  
  
    beforeEach(function() {  
        calculator = require('calculator');  
    });  
  
    it('should add two numbers correctly', function() {  
        expect(calculator.add(2, 3)).toEqual(5);  
    });  
});
```

Jasmine 1.0.2 revision 1298837858

Show ☐ passed ☐ skipped

124 specs, 0 failures in 0.236s Finished at Fri Aug 05 2011 12:16:07 GMT-0400 (Eastern Daylight Time) [run all](#)

# Demo

*Unit Testing jQuery and mocks*

CSS is wonderfully simple.

```
selector {  
    property: value;  
}
```

But sometimes it feels a little too simple.

# Take it up a level - CSS Compilers

## SASS

*WebWorkbench (VS), SassAndCoffee (ASP.NET), Ruby*

## LESS

*WebWorkbench (VS), dotless (ASP.NET), Java, Ruby, Node, JavaScript*

## Stylus

*Node*

# Repetition in CSS sucks

```
.content-navigation {  
    border-color: #3bbfce;  
}  
  
.border {  
    border-color: #3bbfce;  
}
```



# SASS gives us variables

```
$blue: #3bbfce;

.content-navigation {
  border-color: $blue;
}

.border {
  border-color: $blue;
}
```

SASS



```
.content-navigation {
  border-color: #3bbfce;
}

.border {
  border-color: #3bbfce;
}
```

CSS

# Having to repeat selector paths sucks

```
header { background-color: blue; }  
header a { font-weight: normal; }  
header a:hover { font-weight: bold; }
```

# SASS gives us nesting

```
header {  
  background-color: blue;  
  
  a {  
    font-weight: normal;  
    &:hover {  
      font-weight: bold;  
    }  
  }  
}
```

SASS



```
header { background-color: blue; }  
  
header a { font-weight: normal; }  
  
header a:hover { font-weight: bold; }
```

CSS

# Having to repeat vendor prefixes sucks

```
#container {  
  -ms-box-flex: 1;  
  -o-box-flex: 1;  
  -webkit-box-flex: 1;  
  -moz-box-flex: 1;  
  box-flex: 1;  
}
```

# SASS gives us mixins

```
@mixin box-flex($flex) {  
  -ms-box-flex: $flex;  
  -o-box-flex: $flex;  
  -webkit-box-flex: $flex;  
  -ms-box-flex: $flex;  
  box-flex: $flex;  
}  
  
#container {  
  @include box-flex(1);  
}
```

SASS



```
#container {  
  -ms-box-flex: 1;  
  -o-box-flex: 1;  
  -webkit-box-flex: 1;  
  -moz-box-flex: 1;  
  box-flex: 1;  
}
```

CSS

# Platform Consistency

*Or, everyone else's browser sucks.*

Writing an app for a single  
browser is easy.

Writing a single app for multiple  
browsers can be hard.

# Just ask it

```
function hasCssProp(prop) {  
    var el = document.createElement('div'),  
        style = el.style;  
  
    return typeof style[prop] == 'string';  
}
```

```
// In IE9, Chrome, Firefox, etc...  
hasCssProp('borderRadius'); // true
```

```
// In IE6, IE7, IE8, etc...  
hasCssProp('borderRadius'); // false
```



“An indispensable tool.”

— Bruce Bowman, *Adobe BrowserLab Product Manager*

**Modernizr** is an open-source JavaScript library that helps you build the next generation of HTML5 and CSS3-powered websites.

## Why use Modernizr?

Taking advantage of the new capabilities of HTML5 and CSS3 can mean sacrificing control over the experience in older browsers.

Modernizr 2 is your starting point for making the best websites and applications that work exactly right no matter what browser or device your visitors use.

Thanks to the new Media Query tests and built-in [YepNope.js](#) micro-library as

`Modernizr.load()`, you can now combine feature detection with media queries and conditional resource loading. That gives you the power and flexibility to optimize for every circumstance.

Check out the [full list of features](#) that Modernizr detects, or learn more about [conditional resource loading with Modernizr](#).

## Download Modernizr 2

[View documentation](#)

Use the commented, uncompressed Development version to develop with and learn from.



**DEVELOPMENT**

Uncompressed, 42 Kb

Then, dive into the Production build tool and pick just the tests you need!



**PRODUCTION**

Configure Your Build

## Get started with Modernizr

While Modernizr gives you finer control over the experience through JavaScript-driven feature detection, it is important to continue to use best practices throughout your development process. Use progressive enhancement wherever you can, and don't sacrifice accessibility for convenience or performance.

- [Documentation: Getting started](#)
- [Taking Advantage of HTML5 and CSS3 with Modernizr](#), Faruk Ateş
- [How to use Modernizr](#), Inayaili de León
- [wiki] [The Undetectables: features that cannot be detected](#)
- [wiki] [Cross-browser Polyfills](#)

Also check out our [Resources section](#).

**Tip:** use [haz.io](#) to quickly test your current browser's features.





```
<!DOCTYPE html>
▼<html class=" js flexbox canvas canvastext webgl no-touch
  geolocation postmessage websqldatabase indexeddb hashchange
  history draganddrop websockets rgba hsla multiplebgs
  backgroundsize borderimage borderradius boxshadow textshadow
  opacity cssanimations csscolumns cssgradients cssreflections
  csstransforms csstransforms3d csstransitions fontface
  generatedcontent video audio localstorage sessionstorage
  webworkers applicationcache svg inlinesvg smil svgclippaths">
►<head>...</head>
```



```
<!-- DOCTYPE html -->
☐<html class=" js no-flexbox no-canvas no-canvas text no-webgl no-touch no-geolocation
  postmessage no-websqldatabase no-indexeddb hashchange no-history draganddrop
  no-websockets no-rgba no-hsla no-multiplebgs no-backgroundsize no-borderimage
```

# Demo

*Modernizr + SASS + CSS3 Hawtness + CSS2 Not-so-hawtness*

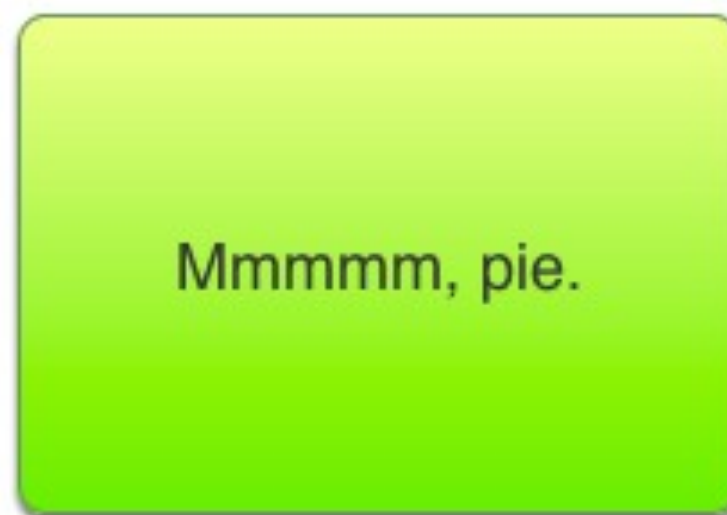
The elephant in the room...

*“But my company is all IE6...”*

progressive internet explorer



```
border-radius: 8px;  
box-shadow: #666 0px 2px 3px;  
background: linear-gradient(#eef999, #66ee33);  
behavior: url(/PIE.htc);
```



<http://css3pie.com/>

## Cross-browser support for the Flexible Box Model

Flexie | Flexbox Playground - Windows Internet Explorer

http://flexiejs.com/playground/?random

Flexie | Flexbox Playground

< Home

### The Playground

Box Orient: Vertical

Box Align: Stretch

Box Direction: Normal

Box Pack: Start

Box Flex: 1 1 1

Box Ordinal Group: 1 2 3

Box 1

Box 2

Box 3

```
#box-wrap-inner {  
    display: -webkit-box;  
    display: -moz-box;  
    display: box;  
  
    -webkit-box-orient: vertical;  
}
```

☒ Omit Defaults

Done

Internet 100%

You can fake a lot.

But honestly, it sucks.

Accept reality.

# Chrome Frame - a plugin with benefits

## System Admin Compatible

*Roll out with MSI*

*Control with Group Policy Settings*

## User Installable

*Just include a script in page*

*Non-admin installs supported*

## Keep IE

*Sites have to explicitly opt-in to Chrome Frame*

*Sites depending on IE6/7 stay in IE6/7*

<http://www.google.com/chromeframe>



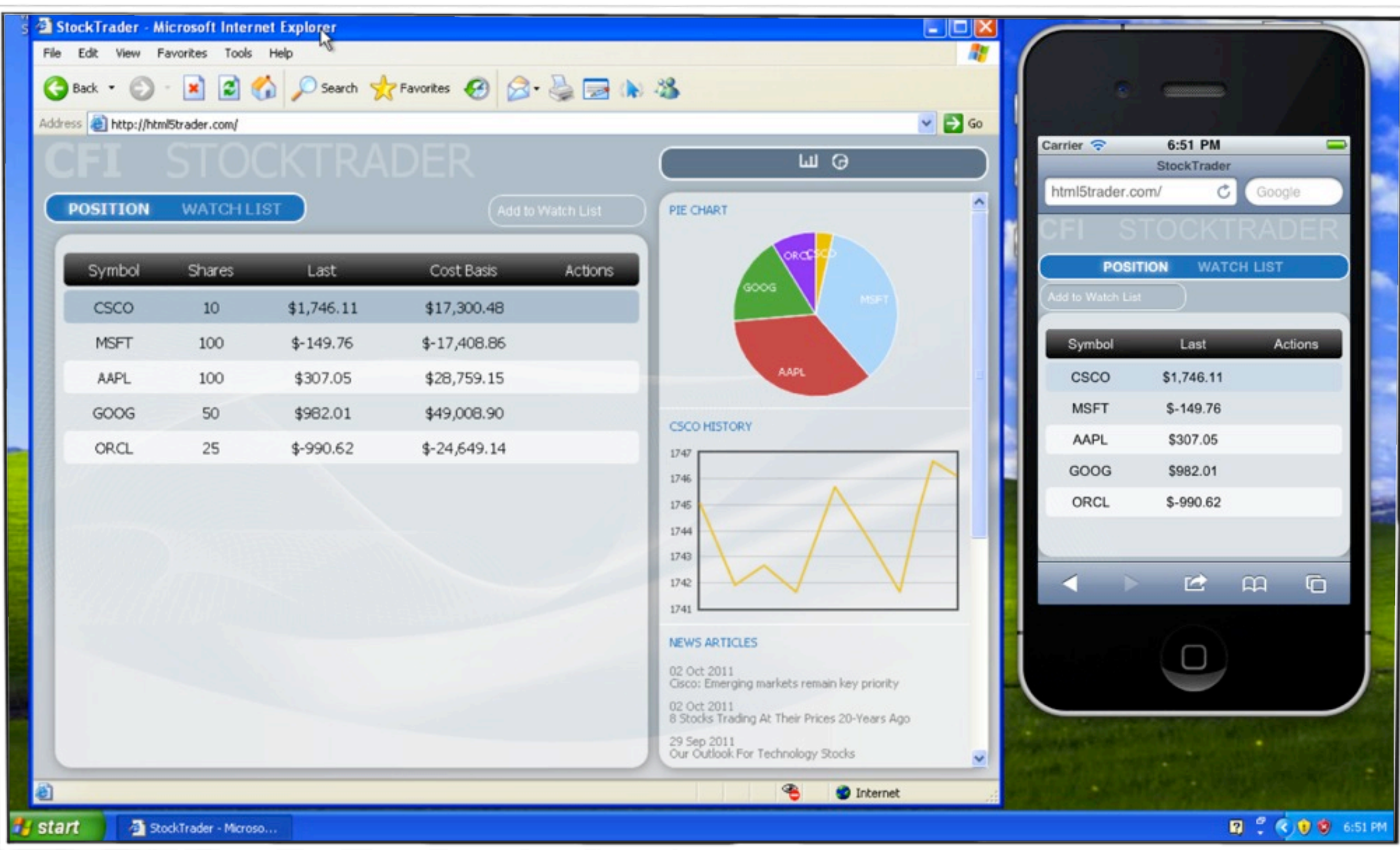


```
<meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
```

Applications have to explicitly opt-in so your legacy applications won't be affected

# Demo

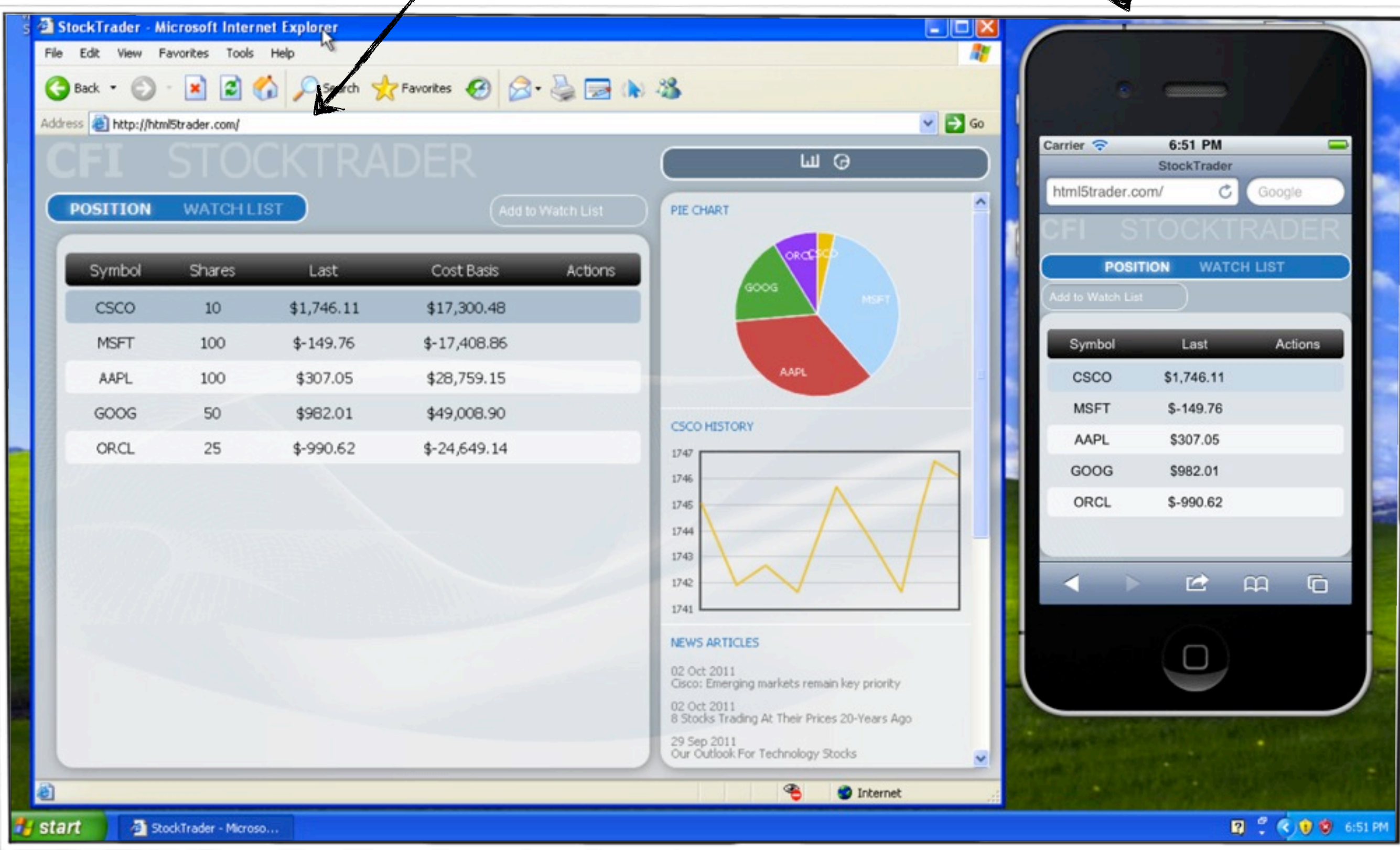
*HTML5 Everywhere*



Running the same application - <http://html5trader.com>

Internet Explorer 6

iPhone

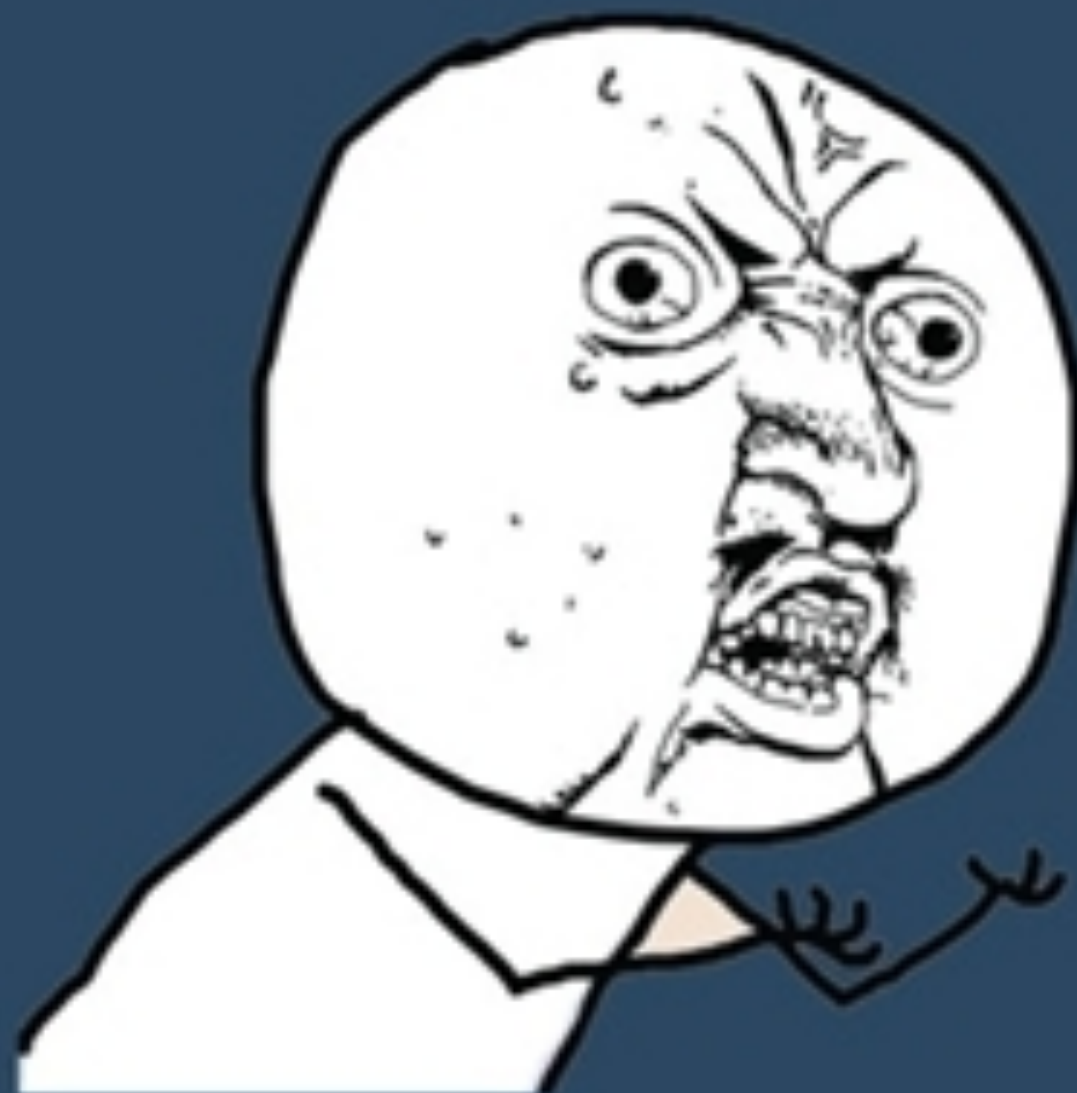


Running the same application - <http://html5trader.com>

*“This HTML5 stuff would be fine,  
if only there was decent tooling...”*

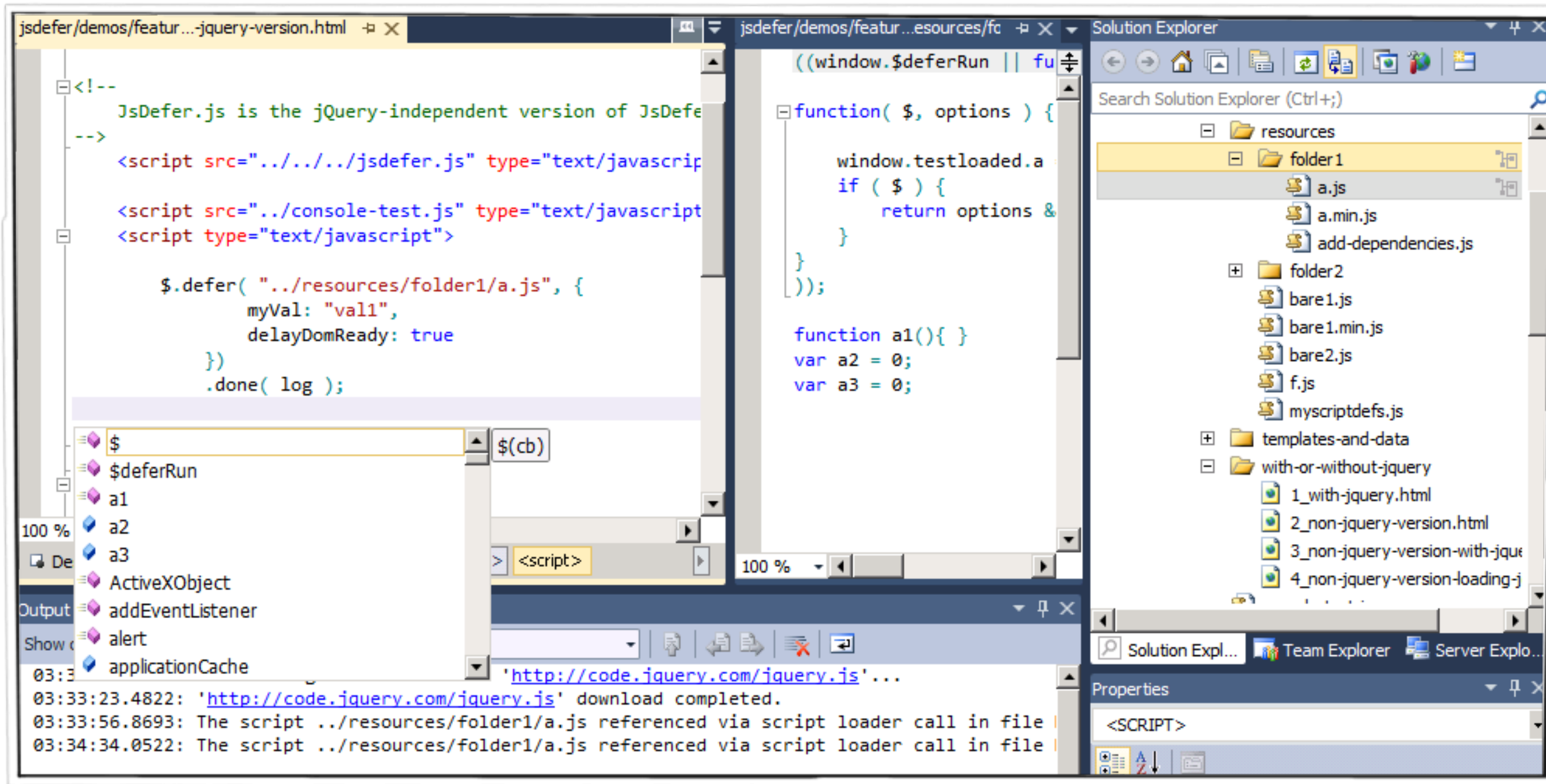


**NO INTELLISENSE?**



**Y U NO HTML5 TOOLING!?**

# Visual Studio 11 is looking much better...



<http://blogs.msdn.com/b/webdevtools/archive/2011/09/15/new-javascript-editing-features-for-web-development-in-visual-studio-11-developer-preview.aspx>

# WebStorm 2.1

[Overview](#)
[What's New](#)
[Features & Screenshots](#)
[Docs & Demos](#)
[Download](#)
[Buy](#)

## WebStorm — The smartest JavaScript IDE

### Create great web sites in a great IDE

The best JavaScript IDE with HTML editor is at your fingertips. Navigate through files easily. Use relevant autocompletion for everything in your code. Get notified about code problems on the fly. Complicated languages mixtures with HTML markup or SQL inside a JavaScript? [Check how](#) a modern IDE such as WebStorm handles this.

### Open code from anywhere and start working in no time

Open an existing folder, check out the code from a VCS, or even specify your FTP to download and auto-sync your files with. You're up and running in moments. Watch this short demo on getting started.

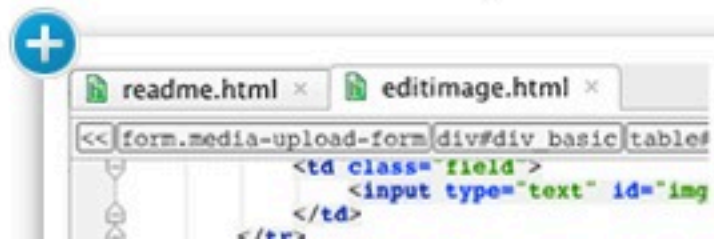
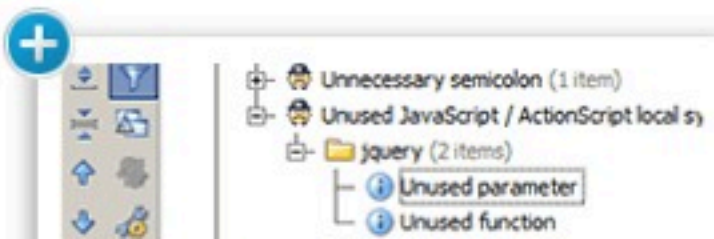
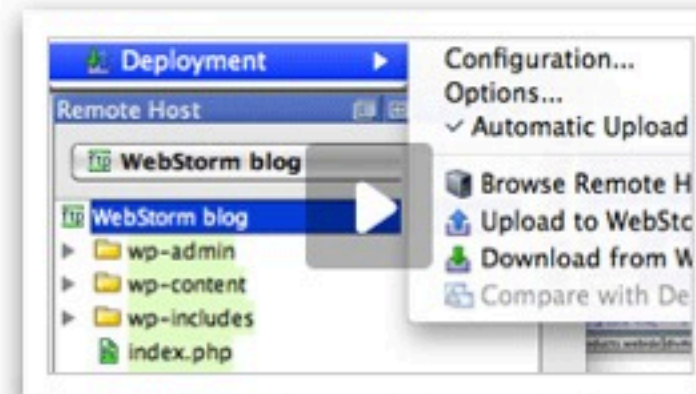
### Use the same environment on Windows, Mac OS and Linux



Download

30-day free trial for Mac OS X (55.2MB) [more](#)

Check out [more JetBrains IDEs](#) for:





example - [C:\job\example] - ... \jquery\tree\jquery.treeview.js - JetBrains WebStorm 2.0

File Edit Search View Go To Code Refactor Run Tools Version Control Window Help

example jquery tree jquery.treeview.js

Project C:\job\example\j... View as: Project

tree

- demo
- images
- lib
  - changelog.txt
  - jquery.treeview.async.js
  - jquery.treeview.css
  - jquery.treeview.js
  - jquery.treeview.min.js
  - jquery.treeview.pack.js
- todo

create-table.html  
form\_dissapoint.html  
modal-dialog.html  
rating.html  
rating1.html  
rating2.html  
ss.html  
tabs.html  
tabs1.html  
tabs\_accordion.html  
test.html

```
heightHide: function(animated, callback) {  
    if (animated) {  
        this.animate({ height: "hide" }, animated, callback);  
    } else {  
        this.hide();  
        if (callback)  
            this.each(callback);  
    }  
},  
prepareBranches: function(settings) {  
    if (!settings.prepe) {  
        // m = prepend  
        this.m.prependChild ot(ul)".addClass(CLASSES.last);  
        // p = prependTo only those marked as closed, anyway except those  
        this.filter((settings.collapsed ? "" : "." + CLASSES.closed) + ":not(." + CL  
    }  
    // return all items with sublists  
    return this.filter(":has(>ul)");  
},  
applyClasses: function(settings, toggler) {  
    this.filter(":has(>ul):not(:has(>a))").find(">span").click(function(event) {  
        toggler.apply($(this).next());  
    }).add( $("a", this) ).hoverClass();  
}
```

Inspection Results for Inspection Profile 'Project Default'

example (51 items)

- General (6 items)
  - Annotator (3 items)
  - Unnecessary semicolon (1 item)
  - Unused JavaScript / ActionScript local symbol (2 items)
    - jquery (2 items)
      - Unused parameter
      - Unused function
- Spelling (45 items)


Name: jquery.treeview.js

Location: file [jquery.treeview.js](#)

Problem synopsis: Unused parameter at line [66](#)

Unresolved variable prepen 56:32 UTF-8 Insert 90M of 483M



A woman with long brown hair is standing in a field of tall, golden-brown grass. She is wearing a light-colored bucket hat with a dark band, a white t-shirt with black and red graphics, and a dark blue jacket. She is looking off to the side with a slight smile. Her hands are reaching out towards the grass. A text box is overlaid on the bottom left of the image.

**We use Intellisense to  
'Explore' and 'Discover'**

<http://www.flickr.com/photos/gemmabou/4622213880/>



The screenshot shows a web browser's developer console with a JavaScript file named `trendLineView.js` open. The code in the file includes event subscriptions, a `createChart` function, and `symbolSelected` and `symbolUpdated` methods. A red arrow points to line 29, `this.symbol = data.symbol;`. A yellow tooltip displays the runtime object for `data`, which is an `Object` with `symbol: "GOOG"` and `__proto__: Object`. The console at the bottom shows the command `> Object.keys(this)` with the output `["options", "el", "bus", "chartEl", "..."]`.

```
16 bus.sub('symbol-selected', this.symbolSelected.bind(this));
17 bus.sub('symbol-updated', this.symbolUpdated.bind(this));
18 },
19 createChart: function() {
20   this.chart = $.plot(this.chartEl, [ this.symbolData ], {
21     series: { shadowSize: 0 },
22     yaxis: { },
23     xaxis: { show: false }
24   });
25 },
26 symbolSelected: function(data) {
27   var symbol = data.symbol;
28
29   this.symbol = data.symbol;
30   this.symbolData = this.getSymbolData(symbol);
31
32   // Update the title
33   this.title = symbol;
34   this.trigger('symbol-selected', symbol);
35
36   this.createChart();
37 },
38 symbolUpdated: function(data) {
39   var symbol = data.symbol;
40   var time = data.time;
```

**Object**

- symbol: "GOOG"
- \_\_proto\_\_: Object

`> Object.keys(this)`  
`["options", "el", "bus", "chartEl", "..."]`  
`> |`

With modern browsers we can easily and quickly explore our code at runtime

**Smaller Surfaces**

// Getter

```
$('#test').css('backgroundColor');
```

// Setter

```
$('#test').css('backgroundColor', 'red');
```

// Bigger setter

```
$('#test').css({  
    backgroundColor: 'red'  
});
```



Static analysis for JavaScript

```
function add(a, b, c) {  
    return a + b;  
}
```

```
function add(a, b, c) {  
    return a + b;  
}
```

*Error:*

*Unused variable: c 1 add*



```
var person = {  
    name: 'David',  
    company: 'Lab49',  
};
```

```
var person = {  
    name: 'David',  
    company: 'Lab49',  
};
```

*Error:*

Problem at line 3 character 25: Unexpected ','.

```
company: 'Lab49',
```

```
function createPerson(name) {  
    return  
    {  
        name: name  
    };  
}
```

```
function createPerson(name) {  
    return  
    {  
        name: name  
    };  
}
```

*Error:*

Problem at line 2 character 11: Expected ';' and instead saw '{'.

return

Problem at line 3 character 5: Unreachable '{' after 'return'.

{

There's tons of other tools....

Automation Testing

Validators

Performance

Debuggers

Profilers

Designers

On many other platforms...

.NET

Java

Ruby

Python

Node

# It is not Silverlight vs HTML5

They're both valid options with different pros and cons

You guys are experts in building front-end applications.

Although the code looks a little different...

The patterns, techniques and good practices are the same.



Be Confident

Be Fearless

(and be sensible)

Hang on,

You went an entire talk to a Silverlight audience and didn't once mention MVVM?

Yep - although you can reuse a lot of knowledge, don't try to do everything exactly the same.  
I encourage you to start with the simplest thing and build from there.

You didn't cover ...!?

*Acceptance Testing*

*CoffeeScript*

*Underscore*

*Templates*

*Server Tools*

*IOC*

*jQuery*

*JavaScriptMVC*

*HTML5 Boiler Plate*

*KnockOut*

*Flow Control*

*Project Silk*

*BDD*

*Backbone*

*ECMAScript 6*

*ASP.NET Integration*

*jQuery UI*

*Promises*

*Goldfish*

*Script Loaders*

Dec 6th

RequireJS 1.0

Callbacks, Promises and Coroutines (on my!)

# The NY HTML5 Application Developers Group

Dec 6th

RequireJS 1.0

Callbacks, Promises and Coroutines (on my!)

<http://www.meetup.com/html5-app-developers>

New York .NET Meetup



<http://www.meetup.com/NY-Dotnet>



<http://www.lab49.com>

// Thanks for listening!

return;